

- 34 -

Abstract

Document Imaging System

5 The present invention relates to the use of a camera and a structured light pattern in a platenless document imaging system (1) to capture the image of a page or of a bound book together with depth information that can be inferred from the light pattern. The imaging system (1) comprises a
10 support surface (12) for a document (30) to be imaged, a light stripe projector (4) arranged to project a plurality of diverging sheets of light that extend from the projector (4) towards the support surface (12) for forming a series of stripes across the document (30), a camera (2)
15 having a detector array (22) for capturing an image of the document (30) and of light stripes projected onto the document (30), a processor (25) arranged to receive (23) from the detector array (22) data representative of images of the document (30) and of the light stripes and to
20 calculate therefrom a three-dimensional profile of the document (30) relative to a reference surface, characterised in that the relative divergence of adjacent sheets of light varies laterally across the sheets so that the stripes are concentrated where the divergence is
25 relatively low.

Figure 1